

Amendments to the Claims

Please amend the claims, without prejudice, as follows, where underlining identifies added material and strikethroughs identify deleted material:

Listing of Claims:

1-31. (Canceled).

32. (Previously Presented) A wheeled structure, comprising:

a body having at least first and second side portions;

a first end wheel element, an intermediate wheel element, and a second end wheel element rotatably attached to the first and second side portions, respectively, the intermediate wheel element having a wider track than the first end wheel element and the second end wheel element;

a tail element pivotally coupled to a portion of the body, the tail element being pivotally coupled to a portion of the body via an articulation element; and

a drive module coupled to the tail element to control the movement of the tail element between a first, stowed position and a second position where said tail element can make selective contact with a level ground plane,

wherein the first end, intermediate, and second end wheel elements are arrayed with a selected degree of rocker of the wheel elements coupled to the body, to enable the wheeled structure to turn-in-place, wherein the intermediate wheel element is configured to contact the level ground plane, and the first and second end wheel elements are configured to selectively contact or be adjacent to the level ground plane.

33-38. (Canceled).

39. (Previously Presented) The wheeled structure of claim 32, wherein the articulation element is a hinge.

40. (Previously Presented) The wheeled structure of claim 32 wherein the articulation element is a pivot.

41. (Previously Presented) The wheeled structure of claim 32, wherein the articulation element is a flexible body portion.

42-53. (Canceled).

54. (Currently Amended) The wheeled structure of claim 32, wherein there is no overlap between adjacent wheel elements of the ~~first and second sets of wheel elements~~ first end wheel element, intermediate wheel element and second end wheel element.

55. (Currently Amended) The wheeled structure of claim 54, wherein the wheel elements of the ~~first and second sets of wheel elements~~ first end wheel element, intermediate wheel element and second end wheel element, respectively, are aligned in a row.

56. (Canceled).

57. (Previously Presented) The wheeled structure of claim 32, wherein the tail is curved.

58. (Currently Amended) The wheeled structure of claim 32, wherein when the tail is articulated furthest forward with respect to the ~~base~~ body, the tail is long enough to contact a stairway step forward of the first end wheel element.

59. (Previously Presented) The wheeled structure of claim 32, wherein the tail is configured to contact a first step of a stairway and lift the first end wheel element to attain the first step.

60. (Previously Presented) The wheeled structure of claim 32, wherein the body has a profile in a plane disposed between the first and second sides and the tail substantially conforms to the body profile when in the first, stowed position.

61. (Previously Presented) The wheeled structure of claim 60, wherein the plane is parallel to the first and second sides.

62. (Previously Presented) The wheeled structure of claim 60, wherein the plane is centered between the first and second sides.

63. (Currently Amended) A wheeled structure, comprising:
a body having at least first and second side portions and having a profile in a center plane, the profile comprising a top-of-body profile;
first and second sets of wheel elements rotatably attached to the first and second side portions, respectively;

a tail element pivotally coupled to a portion of the body, the tail element being pivotally coupled to ~~a portion of~~ the body via an articulation element and substantially conforming to and substantially within the top-of-body body profile when in a stowed position; and

a drive module coupled to the tail element to control the movement of the tail element between a first, stowed position and a second position where said tail element can make selective contact with a ground plane, wherein the drive module controls is operable to control, in a continuously variable manner, the angle and position of the tail element relative to the body, so that the tail element can assist in enabling the wheeled structure to traverse steep or difficult terrain.

64. (Previously Presented) The wheeled structure of claim 63, wherein the articulation element is a hinge.

65. (Previously Presented) The wheeled structure of claim 63, wherein the articulation element is a pivot.

66. (Previously Presented) The wheeled structure of claim 63, wherein the articulation element is a flexible body portion.

67. (Previously Presented) The wheeled structure of claim 63, wherein there is no overlap between adjacent wheel elements of the first and second sets of wheel elements.

68. (Previously Presented) The wheeled structure of claim 67, wherein the wheel elements of the first and second sets of wheel elements, respectively, are aligned in a row.

69. (Previously Presented) The wheeled structure of claim 68, wherein each of the first and second sets of wheel elements is comprised of at least a first end wheel element, an intermediate wheel element, and a second end wheel element, and wherein the intermediate wheel element is configured to contact the ground plane, and the first and second end wheel elements are configured to selectively contact or be adjacent to the ground plane.

70. (Currently Amended) ~~The wheeled structure of claim 69,~~ A wheeled structure, comprising:

a body having at least first and second side portions and having a profile in a center plane;

first and second sets of wheel elements rotatably attached to the first and second side portions, respectively;

a tail element pivotally coupled to a portion of the body, the tail element being pivotally coupled to the body via an articulation element and substantially conforming to the body profile when in a stowed position; and

a drive module coupled to the tail element to control the movement of the tail element between a first, stowed position and a second position where said tail element can make selective contact with a ground plane, wherein the drive module controls the angle and position of the tail element relative to the body;

wherein there is no overlap between adjacent wheel elements of the first and second sets of wheel elements;

wherein the wheel elements of the first and second sets of wheel elements, respectively, are aligned in a row;

wherein each of the first and second sets of wheel elements is comprised of at least a first end wheel element, an intermediate wheel element, and a second end wheel element, and wherein the intermediate wheel element is configured to contact the ground plane, and the first and second end wheel elements are configured to selectively contact or be adjacent to the ground plane; and

wherein the intermediate wheel element has a wider track than the first end wheel element and the second

71. (Currently Amended) The wheeled structure of claim 63, wherein when the tail is articulated furthest forward with respect to the base, the tail is long enough to contact a step forward of ~~the first end~~ a forwardmost wheel element of either of the first and second sets of wheel elements.

72. (Currently Amended) The wheeled structure of claim 63, wherein the tail is configured to contact a first step of a stairway and lift ~~the first end~~ a forwardmost wheel element of either of the first or second sets of wheel elements to attain the first step.

73. (Currently Amended) The wheeled structure of claim 63, wherein the first and second sets of wheel elements each comprise at least front and rear wheels; and

the tail, when in the stowed position, is disposed substantially entirely within a profile defined by a plane substantially tangent to a topmost point ~~the top~~ of the front and rear wheels and within a perimeter defined by the front and rear wheels.

74. (Currently Amended) A wheeled structure, comprising:
a body having at least first and second side portions;
a first end wheel element, an intermediate wheel element, and a second end wheel element rotatably attached to the first and second side portions, respectively, the intermediate

wheel element having a wider track than the first end wheel element and the second end wheel element;

wherein each first end, intermediate, and second end wheel elements is arrayed with a selected degree of rocker of the wheel elements coupled to the body, wherein the intermediate wheel element is always in contact with the level ground plane, and the first and second end wheel elements are selectively in contact with or adjacent to the level ground plane to enable the wheeled structure to turn-in-place, enhance stability, and to reduce friction losses on smooth terrain, and further wherein the first end, intermediate, and second end wheel elements rotatably attached to the first and second side portions, respectively, are collectively arrayed in a geometrical arrangement having left-right and fore-aft symmetry.

75. (Canceled).

76. (Currently Amended) ~~The wheeled structure of claim 74 further comprising:~~
A wheeled structure, comprising:

a body having at least first and second side portions;

a first end wheel element, an intermediate wheel element, and a second end wheel element rotatably attached to the first and second side portions, respectively, the intermediate wheel element having a wider track than the first end wheel element and the second end wheel element;

wherein each first end, intermediate, and second end wheel elements is arrayed with a selected degree of rocker of the wheel elements coupled to the body, wherein the intermediate wheel element is always in contact with the level ground plane, and the first and second end wheel elements are selectively in contact with or adjacent to the level ground plane to enable the wheeled structure to turn-in-place, enhance stability, and to reduce friction losses on smooth terrain;

a tail element pivotally coupled to a portion of the body, the tail element being pivotally coupled to ~~a portion of~~ the body via an articulation element and substantially conforming to the body profile when in a stowed position; and

a drive module coupled to the tail element to control the movement of the tail element between a first, stowed position and a second position where said tail element can make selective contact with a ground plane, wherein the drive module controls the angle and position of the tail element relative to the body.

77. (New) A wheeled structure, comprising:
a body having at least first and second side portions;
a first end wheel element, an intermediate wheel element, and a second end wheel element rotatably attached to the first and second side portions, respectively;
a tail element pivotally coupled to a portion of the body, the tail element being pivotally coupled to a portion of the body via an articulation element; and
a drive module coupled to the tail element to control the movement of the tail element from a first, stowed position to at least one second position where said tail element can make selective contact with terrain;

wherein at least one wheel element is substantially scalloped in profile.

78. (New) The wheeled structure of claim 77 wherein the intermediate wheel elements having a wider track than the first end wheel element and the second end wheel element

79. (New) The wheeled structure of claim 77 wherein the tail element, when in the at least one second position, can make selective contact with a level ground plane.

80. (New) The wheeled structure of claim 77 wherein at least one end wheel element is scalloped, and wherein at least one intermediate element is substantially smooth in profile, thereby facilitating turn-in-place.

81. (New) The wheeled structure of claim 77 wherein the substantially scalloped profile is selected such that a concave portion of the scallop profile is operable to substantially engage a bullnosed stair step edge.

82. (New) The wheeled structure of claim 77 wherein the tail element is weighted such that when the tail element is in the stowed position, the center of gravity of the wheeled structure is moved substantially forward, respective to the center of gravity when the tail element is in the at least one second position.

83. (New) The wheeled structure of claim 77 wherein the tail element comprises a flipper element coupled to the body, for making selective contact with terrain, the flipper being movable between a first stowed position and at least one second position in which the flipper makes selective contact with terrain.

84. (New) The wheeled structure of claim 83 wherein the flipper element is pivotally coupled to the body and can be pivoted with respect to at least a portion of the body, under

control of an angle control element operable to control the angle of the flipper with respect to at least a portion of the body.

85. (New) The wheeled structure of claim 84 wherein the center of gravity of the wheeled structure is substantially over the intermediate wheel elements when the flipper is in the stowed position, and substantially forward of the intermediate wheel elements when the flipper is in the at least one second position.

86. (New) A wheeled structure, comprising:
a body having at least first and second side portions;
a first end wheel element, an intermediate wheel element, and a second end wheel element rotatably attached to the first and second side portions, respectively;
a tail element pivotally coupled to a portion of the body, the tail element being pivotally coupled to a portion of the body via an articulation element; and
a drive module coupled to the tail element to control the movement of the tail element from a first, stowed position to at least one second position where said tail element can make selective contact with terrain,

wherein the tail element is weighted such that when the tail element is in the forward position, the center of gravity of the wheeled structure is moved substantially forward, relative to the center of gravity of the wheeled structure when the tail element is in the at least one second position.

87. (New) The wheeled structure of claim 86 wherein the intermediate wheel element has a wider track than the first end wheel element and the second end wheel element.

88. (New) The wheeled structure of claim 86 wherein the tail element, when in the at least one second position, can make selective contact with a level ground plane.

89. (New) The wheeled structure of claim 86 wherein the tail element is weighted by a weighting element.

90. (New) The wheeled structure of claim 89 wherein the weighting element comprises batteries located substantially within or affixed to the tail element.

91. (New) The wheeled structure of claim 86 wherein at least one wheel element is substantially scalloped in profile.

92. (New) The wheeled structure of claim 86 wherein the tail element comprises a flipper element coupled to the body, for making selective contact with terrain, the flipper

being movable between a first stowed position and at least one second position in which the flipper makes selective contact with terrain.

93. (New) The wheeled structure of claim 92 wherein the flipper element is pivotally coupled to the body and can be pivoted with respect to at least a portion of the body, under control of an angle control element operable to control the angle of the flipper with respect to at least a portion of the body.

94. (New) The wheeled structure of claim 93 wherein the center of gravity of the wheeled structure is substantially over the intermediate wheel elements when the flipper is in the stowed position, and substantially forward of the intermediate wheel elements when the flipper is in the at least one second position.